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EXAMINER				
CHUNG, JULIUS J				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/820,361

Applicant(s)

PAGANI, GIOVANNI

Examiner

Julius J. Chung

Art Unit

4182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/02)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 11 both describe a step for a method comprising "identifying at least one fixed income security that contributes to the performance of an investment portfolio". This language renders the claim indefinite because it is uncertain whether there is any extenuating bounds set forth by this method other than a simple randomized selection and investigation of one individual security. It is uncertain as to what limitation is comprised by this identification of said security and how it is determined that this security contributes to the performance of the portfolio other than the fact that this security may be a part of the aforementioned portfolio.

There is furthermore no support in the spec to say that this step does provide any limitations to the portfolio attribution method and so this step will not be given patentable weight.

3. Claims 11-20 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements. The applicant is claiming a system however only one component of such system is claimed. A single component does not constitute a system and so there are essential elements omitted that qualify the invention as such.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Edwards (Edwards, Greg (1997, April). A simple model for bond portfolio performance attribution. Canadian Investment Review, 10(1), 14-17. Retrieved October 31, 2007, from ABI/INFORM Global database. (Document ID: 418349191)).**

As to claim 1, Edwards discloses: A method for attributing investment portfolio performance (bond portfolio performance attribution; title of reference) comprising: identifying at least one fixed income security (“...Using the Ontario Hydro 9's of June 24, 2002, which had a total return of 12.23% for the one year period ending December 31, 1996 as an example, the following are the sources of return...” page 2 paragraph 3 whereas the fixed income security was a bond [the subject of the paper] issued by this company) that contributes to the performance of an investment portfolio (“...want to know how fixed-income managers achieve portfolio returns...” page 1 paragraph 1); and decomposing the performance of the identified fixed income security (“In this extended attribution model, there are eight sources of return that can be put into four groups plus the unexplained or residual return,” page 2 paragraph 3 whereas the return is being decomposed

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into its specific sources) into at least one component **(for example component 7, “Changes in individual OAS spreads”, part of Group 4, “Security Specific”, which is “...The return due to the yield on specific bond moving relative to the yield on its sector...” page 3 paragraph 3. This component is being attributed security allocation strategy)** that corresponds to the performance attributed to at least one investment strategy that contributes to the performance of the identified fixed income security.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards (Edwards, Greg (1997, April). A simple model for bond portfolio performance attribution. Canadian Investment Review, 10(1), 14-17. Retrieved October 31, 2007, from ABI/INFORM Global database. (Document ID: 418349191)).**

As to claim 11, Edwards et al. teaches: a system ("Most investment accounting systems (both in-house and third party) do not interface well with attribution systems and do not store enough information to allow anything but simple attribution," page 1 paragraph 4) for attributing investment portfolio performance that performs a method that comprises: identifying at least one fixed income security that contributes to the performance of an investment portfolio; and decomposing the performance of the identified fixed income security into at least one component that corresponds to the performance attributed to at least one investment strategy that contributes to the performance of the identified fixed income security (see rejection for claim 1).

What Edwards et al. fails to teach is: at least one computing device.

It is inherent from the references to the system and the large amount of data that this analysis must have been done with a computing device.

It would have thus been obvious to one of ordinary skill in the art to carry out the method as disclosed in Edwards et al. with a computing device to achieve the claimed invention. The motivation for the combination would be to improve the feasibility of attribution with such large amounts of data.

8. Claims 2, 4-10, 12, and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards (Edwards, Greg (1997, April). A simple model for bond portfolio performance attribution. Canadian Investment Review, 10(1), 14-17. Retrieved October 31, 2007, from ABI/INFORM Global database. (Document ID: 418349191)) in view of Singer et al. (Singer, Brian D, Karnosky, Denis S. (1995, January). The general framework for global investment management and p. Journal of Portfolio Management, 21(2), 84. Retrieved October 31, 2007, from ABI/INFORM Global database. (Document ID: 4706668)).

As to claim 2, Edwards discloses the method of attributing investment portfolio performance as per claim 1.

Edwards, however, fails to disclose the inclusion of a currency allocation component or the inclusion of currency effects altogether because the Edwards reference deals almost exclusively with the Canadian bond market and so effects such as currency risk and differential market selection is excluded.

Singer et al. discloses: the at least one component comprises a fixed income allocation component **(Exhibit 7 and Exhibit 8 whereas both the “market selection”**

component and the “security selection” component are components attributing to fixed income allocation) and a currency allocation component (Exhibit 7 and Exhibit 8 whereas the “currency selection” component would be attributed to currency allocation of return), and wherein the currency allocation component comprises a return attributed to strategies associated with currencies (“The same observations can be made about the deutschemark underweight and the sterling overweight. Thus, the currency attribution is also consistent, showing a 45—basis point addition to the portfolio’s value” page 89 column 2 paragraph 2 referring to currency associated strategies), and the fixed income allocation component comprises a return attributed to fixed income securities (“The market allocation contribution is indicated as positive (69 basis points), accurately reflecting the value added from both the overweight of Germany and the underweight of the UK. Since, from Exhibit 3, the German market would have contributed the most to the total return of the portfolio and the UK the least, the market selection results of the attribution are appropriate” page 89 column 2 paragraph 1 referring to market allocation strategies which is a return attributed to fixed income).

It would have thus been obvious to one of ordinary skill in the art to use the fixed income specific strategy selection decomposition as set forth by Edwards to the security selection component of the more global method of attribution as taught by Singer et al. to achieve the claimed invention. The motivation would be to apply such security

specific strategy allocation to a portfolio that is diversified across multiple national market as is sought in Singer et al.

As to claim 4, Edwards teaches: decomposing the fixed income component into at least one component **(for example component 7, “Changes in individual OAS spreads”, part of Group 4, “Security Specific”, which is “...The return due to the yield on specific bond moving relative to the yield on its sector...” page 3 paragraph 3. This component is being attributed security allocation strategy)** that corresponds to an investment strategy associated with fixed income security asset management.

As to claim 5, Edwards teaches: decomposing the fixed income allocation component into at least one of: a yield curve management strategy component , a sector allocation strategy component , and a security selection strategy component **(for example component 7, “Changes in individual OAS spreads”, part of Group 4, “Security Specific”, which is “...The return due to the yield on specific bond moving relative to the yield on its sector...” page 3 paragraph 3. This component is being attributed security allocation strategy).**

As to claim 6, Edwards teaches: decomposing the fixed income allocation component into at least one of: a duration allocation strategy component, a curve positioning strategy component , a market allocation component, a sector allocation

strategy component , and a security selection strategy component (**for example component 7, “Changes in individual OAS spreads”, part of Group 4, “Security Specific”, which is “...The return due to the yield on specific bond moving relative to the yield on its sector...” page 3 paragraph 3. This component is being attributed security allocation strategy).**

As to claim 7, Edwards teaches: decomposing the fixed income allocation component into at least one component that corresponds to a driver along which the investment strategy is set (components 4 and 5, “Parallel shifts in the yield curve” and “Changes in the shape of the yield curve”, part of Group 2, “Yield Curve movements”, both deal with yield changes and therefore inherently interest rate changes which are drivers for strategies involving so called “...curve management...” page 2 paragraph 10 as component 4 “Parallel shifts in the yield curve” would deal with duration allocation strategy because it implies general changes in the interest rate that affect the duration and component 5 “Changes in the shape of the yield curve” would be an attribution to curve positioning strategy because dependent on the shape this would return would increase or decrease which is exemplified by “...for example, that in an environment where the yield curve is steepening, a ‘bullet’ portfolio will outperform a ‘barbell’ portfolio, and in a flattening environment, this is reversed,” page 2 paragraph 10).

As to claim 8, Edwards teaches: decomposing the fixed income allocation component into at least one strategy driven by interest rate or yield changes (components 4 and 5, “Parallel shifts in the yield curve” and “Changes in the shape of the yield curve”, part of Group 2, “Yield Curve movements”, both deal with yield changes and therefore inherently interest rate changes which are drivers for strategies involving so called “...curve management...” page 2 paragraph 10 as component 4 “Parallel shifts in the yield curve” would deal with duration allocation strategy because it implies general changes in the interest rate that affect the duration and component 5 “Changes in the shape of the yield curve” would be an attribution to curve positioning strategy because dependent on the shape this would return would increase or decrease which is exemplified by “...for example, that in an environment where the yield curve is steepening, a ‘bullet’ portfolio will outperform a ‘barbell’ portfolio, and in a flattening environment, this is reversed,” page 2 paragraph 10).

As to claim 9, Edwards teaches: decomposing the fixed income allocation component is into at least one of: a duration allocation strategy component, a curve positioning strategy component (for example component 5, “Changes in the shape of the yield curve”, part of Group 2, “Yield Curve movements”, inherently deals with “...curve management...” page 2 paragraph 10 as component 5 “Changes in the shape of the yield curve” would be an attribution to curve positioning strategy because dependent on the shape this would return would increase or decrease

which is exemplified by “...for example, that in an environment where the yield curve is steepening, a ‘bullet’ portfolio will outperform a ‘barbell’ portfolio, and in a flattening environment, this is reversed,” page 2 paragraph 10), and a market allocation strategy component.

As to claim 10, Edwards teaches: a method for attributing investment portfolio performance comprising: identifying at least one fixed income security that contributes to the performance of an investment portfolio; and decomposing the performance of the identified fixed income security into at least one component that corresponds to the performance attributed to at least one investment strategy that contributes to the performance of the identified fixed income security, the investment strategy selected from a group consisting of: a duration allocation strategy component (for example component 4, “Parallel shifts in the yield curve”, part of Group 2, “Yield Curve movements”, inherently deals with “...curve management...” page 2 paragraph 10 as component 4 “Parallel shifts in the yield curve” would deal with duration allocation strategy because it implies general changes in the interest rate that affect the duration), a curve positioning strategy component (for example component 5, “Changes in the shape of the yield curve”, part of Group 2, “Yield Curve movements”, inherently deals with “...curve management...” page 2 paragraph 10 as component 5 “Changes in the shape of the yield curve” would be an attribution to curve positioning strategy because dependent on the shape this would return would increase or decrease which is exemplified by “...for example,

that in an environment where the yield curve is steepening, a 'bullet' portfolio will outperform a 'barbell' portfolio, and in a flattening environment, this is reversed," page 2 paragraph 10), a sector allocation strategy component (for example component 6, "Changes in sector credit spreads", which is "The credit quality return is a function of the degree that yields in the sector widen or tighten versus yields on Canada bonds," page 3 paragraph 2. This component is being attributed sector allocation strategy), and a security selection strategy component (for example component 7, "Changes in individual OAS spreads", part of Group 4, "Security Specific", which is "...The return due to the yield on specific bond moving relative to the yield on its sector..." page 3 paragraph 3. This component is being attributed security allocation strategy).

What Edwards fails to teach is: the investment strategy selected from a group consisting of: a currency allocation component and a market allocation component.

Singer et al. discloses teaches: the investment strategy selected from a group consisting of: a currency allocation component (Exhibit 7 and Exhibit 8 whereas the "currency selection" component would be attributed to currency allocation of return "The same observations can be made about the deutschmark underweight and the sterling overweight. Thus, the currency attribution is also consistent, showing a 45—basis point addition to the portfolio's value" page 89 column 2 paragraph 2 referring to currency associated strategies) and a market allocation component (Exhibit 7 and Exhibit 8 whereas both the "market selection" component and the "security selection" component are components attributing

to fixed income allocation “The market allocation contribution is indicated as positive (69 basis points), accurately reflecting the value added from both the overweight of Germany and the underweight of the UK. Since, from Exhibit 3, the German market would have contributed the most to the total return of the portfolio and the UK the least, the market selection results of the attribution are appropriate” page 89 column 2 paragraph 1 referring to market allocation strategies which is a return attributed to fixed income).

It would have thus been obvious to one of ordinary skill in the art to apply decompose the security component as disclosed in Singer et al. (note: this security component is inherently different than the one discussed in Edwards because it refers to the selection of security excluding market selection and currency effects which therefore makes it a prime candidate for further fixed income analysis) using the attribution of fixed income within a single market as disclosed in Edwards to achieve the claimed invention. It would further be noted that one of ordinary skill in the art would then be able to limit the components to the group as claimed. The motivation for the combination would be to perform a thorough attribution analysis with methods known in the prior art and create a set of bounds around which to analyze the observed returns.

As to claim 12, see rejection for claims 2 and 11.

As to claim 14, see rejection for claims 4 and 11.

As to claim 15, see rejection for claims 5 and 11.

As to claim 16, see rejection for claims 6 and 11.

As to claim 17, see rejection for claims 7 and 11.

As to claim 18, see rejection for claims 8 and 11.

As to claim 19, see rejection for claims 9 and 11.

As to claim 20, see rejection for claims 10 and 11.

9. **Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards (Edwards, Greg (1997, April). A simple model for bond portfolio performance attribution. Canadian Investment Review, 10(1), 14-17. Retrieved October 31, 2007, from ABI/INFORM Global database. (Document ID: 418349191)) in view of Singer et al. (Singer, Brian D, Karnosky, Denis S. (1995, January). The general framework for global investment management and p. Journal of Portfolio Management, 21(2), 84. Retrieved October 31, 2007, from ABI/INFORM Global database. (Document ID: 47066668)) as applied to claim 2 above, and further in view of Novomestky (Novomestky, F. 1997. A dynamic, globally diversified, index neutral synthetic asset allocation strategy. Manage. Sci. 43, 7 (Jul. 1997), 998-1016.).**

As to claim 3, Edwards in view of Singer et al. teaches: the method according to claim 1, wherein the at least one component comprises a fixed income allocation component and a currency allocation component, and wherein the currency allocation component comprises a return attributed to strategies associated with currencies, and the fixed income allocation component comprises a return attributed to fixed income securities. This is as applied to claim 2 above.

What Edwards in view of Singer et al. fails to teach is: the return attributed to the fixed income allocation is a hedged return.

Novomestky teaches: the return attributed to the fixed income allocation is a hedged return (**Equation A12 “Using the same approach in the previous section of**

the appendix, it can be shown that the currency-hedged bond excess return is...This investment is functionally equivalent to a fully leveraged bond futures contract position with no principal exposure..." page 1011 column 2 paragraph 7-8).

It would have thus been obvious to one of ordinary skill in the art to utilize the hedged return as disclosed in Novomestky to the fixed income component in Edwards in view of Singer et al. to achieve the claimed invention. The motivation for the combination would be to utilize hedged returns as is hinted in Singer et al ("**Returns from investments in the UK and Japan are the joint result of the respective local currency returns and the rates of change of the associated exchange rates. In the simple case of fully hedging into the US dollar..." page 85 paragraphs 2-3**) because a hedged returns would provide a fixed income devoid of observed currency risk attributing such return solely to fixed income performance.

As to claim 13, see rejection for claims 3 and 11.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(US 6,003,018) Michaud et al. discloses a method for security selection based upon an analysis in the return expected.

(US 2004/0,236,546) Goldberg et al. discloses a method for creating risk forecasts which cross-analyzes securities that may consist of different strategies to make inferences about the value attribution of different factors.

(US 6,754,639) Ginsberg discloses a system for processing a fixed income portfolio index that provides for real-time evaluation of performance.

(US 7,107,239) Graff discloses a method for decomposing property and other debt instruments into separately valued components.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julius J. Chung whose telephone number is (571)270-1530. The examiner can normally be reached on 7:30 AM-5:00 PM Mon-Fri, Alt. Fri. Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu Nguyen can be reached on (571)272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Julius J Chung/
Examiner, Art Unit 4182 11/1/2007

/Thu Nguyen/
Supervisory Patent Examiner, Art Unit 4182